

WHAT IS CLAIMED IS:

1. A method for modifying the surface of an article, said method comprising the steps of:

5 a) depositing at least a partial functionalized polyelectrolytic tie layer onto the surface of said article so as to create a surface having reactive sites; and

b) chemically attaching an active agent to said reactive sites.

2. The method of claim 1 wherein said chemical attaching is effected by a method chosen from the group consisting of precipitation reactions, covalent reactions, hydrogen bonding, and polymerization reactions.

3. The method of claim 1 wherein said active agent is chosen from the group consisting of anti-microbial agents, polymeric initiators, polymers, and hydrophilic polymers.

15 4. The method of claim 1 wherein said polyelectrolytic tie layer is deposited onto said article surface by applying successive electrolytic tie layers.

5. The method of claim 1 wherein said polyelectrolytic tie layer is deposited onto said article surface by a single coating application.

6. The method of claim 1 wherein said polyelectrolytic tie layer is deposited onto said article surface by dipping.

7. The method of claim 6 wherein said layer is deposited by dipping said article into a first solution comprising a polyionic moiety having a positive or a negative charge, removing said article from said first solution, dipping said article into a second solution comprising a polyionic moiety having a charge that is opposite from said first solution, and removing said article from said second solution.

8. The method of claim 6 wherein said polyelectrolytic tie layer is deposited onto said article surface by dipping said article

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into a solution comprising polyionic moieties of different charges and then removing said article from said solution.

9. The method of claim 1 wherein said polyelectrolytic tie layer is deposited onto said article surface by spraying.

5 10. The method of claim 9 wherein said layer is deposited by spraying said article with a first solution comprising a polyionic moiety having a positive or a negative charge and then spraying said article with a second solution comprising a polyionic moiety having a charge that is opposite from said first solution.

10 11. The method of claim 9 herein said polyelectrolytic tie layer is deposited onto said article surface by spraying said article with a solution comprising polyionic moieties of different charges.

12. The method of claim 1 wherein said article is a biomedical device.

15 13. The method of claim 12 wherein said biomedical device is a contact lens.

14. The method of claim 1 wherein said polyelectrolytic tie layer is deposited onto said article surface by spin-coating said article.

20 15. The method of claim 1 wherein said polyelectrolytic tie layer is deposited onto said article surface by chemisorption.

16. The method of claim 1 wherein said polyelectrolytic tie layer is deposited onto said article surface by vapor deposition.

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